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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/731,801 | 12/09/2003 | Yiren Hong | STL11176 | 4331 |

7590

11/30/2005

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EXAMINER

CAO, ALLEN T

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/731,801

Applicant(s)

HONG ET AL.

Examiner

Allen T. Cao

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,9-13 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 4,7,8 and 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/09/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2652

1. Claims 1-19 are objected to because of the following informalities: The term – An—should be added in front of the term “Apparatus” in claims 1, 11 and 19, all in line 1 . Appropriate correction is required.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-6, 9-13 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oveyssi et al (US. 6,462,914B1) in view of Kim et al (US 2004/0012890 A1).

Oveyssi et al discloses an apparatus having a movable electrical coil 64 adjacent a magnetically permeable structure 62, wherein the coil is latched by a magnetic flux passing across an air gap which creates by a magnet 60, and wherein the coil is subsequently unlatched by application of current to the coil, the current substantially reducing the magnetic flux across the gap and inducing movement of the coil away from the gap (see through out columns 5 and 6 which inherently discloses that the current applied to the coil for interacting with the flux; particularly, see column 5, lines 3-16) as set forth in claims 1 and 11.

Oveyssi et al does not disclose that the gap is extending into the structure (body) as set forth in claim 1 or extending into the shunt member as recited in claims 2 and 11.

Kim et al discloses an apparatus having a movable electrically coil 156, a magnetically permeable structure (151, 152, 164, 166) including a gap 167 which

extending into the body or the shunt member 166 to latch the coil/actuator as recited in claims 1-2 and 11.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the structure of Oveyssi et al with the gap as set forth, supra as taught by Kim et al to provide a stronger magnetic flux at the gap in order to firmly contact the actuator, thus to provide a more stable actuator locking; therefore, prevent damage might occurred to the head.

Regarding claims 3 and 13, Oveyssi et al discloses having a laterally pole member (top portion of the member 62, figure 6) along which the coil moves and a support member (the low reluctance end in figure 6) coupled to the pole member as recited in claim 3.

Regarding claims 5 and 12, Oveyssi et al discloses a permanent magnet 60.

Regarding claims 6 and 11, Oveyssi et al discloses a plate (64A, 64B) coupled to the coil through at least a portion of the magnetic flux passing across the gap flows to retain the coil in a latched position.

Regarding claims 9 and 17, Oveyssi et al discloses that the coil surrounds and moves laterally along the structure.

Regarding claims 10 and 18, Oveyssi et al discloses that the coil forms a portion of a rotary actuator 54 in a storage device, the rotary actuator supporting a data transducing head adjacent a data storage medium.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2652

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Oveyssi et al (US. 6,462,914B1).

Oveyssi et al discloses a movable electrical coil 64 adjacent a magnetically permeable structure 62; and means for latching the coil with respect to the structure with a variable retention force (column 5, line 45 to column 6, line 44; also column 1, line 40 to column 2, line 35 show a means for latching and unlatching the coil with respect to the structure with a variable retention force (fluxes and/or current)) as set forth in claim 19.

6. Claims 4, 7-8 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen T. Cao whose telephone number is (571) 272-7569. The examiner can normally be reached on Mon - Thurs (7:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Cao
Primary Examiner

AC
November 28, 2005